

REMARKS

Applicants courteously solicit favorable reconsideration of this application upon entry of the present Amendment.

Claims

Elected claims 1-7, 9, 16-18, 21, 22, 23, 24 and 25 are presented.

The elected claims 1-7, 16-18, and 23 pertain to a UHT-treated product that has a relatively low viscosity after heat treatment (UHT). The UHT-treated product is reheatable and, when reheated, exhibits a viscosity increase as recited in claims 1, 22 or 24, to mention examples. The elected claims 22 and 24-25 relate to the reheated product.

Traversing the Rejections

Applicants traverse the rejection of claims 1-7, 16-18, and 21-24 under 35 U.S.C. §103(a) as being unpatentable over Kettlitz et al. (U.S. 6,235,894) in view of Daenzer-Alloncle et al. (U.S. 6,139,896). It is respectfully submitted that the rejected and added claim(s) would have been unobvious over the cited references.

Applicants courteously submit the references do not teach the present inventions, would not have been combined and, furthermore, even if, *arguendo*, they were combined, the elected claimed inventions would have been unobvious to a person of ordinary skill in the art.

A technical problem solved by the present Applicant is how to provide a product that does not develop its final viscosity upon UHT conditions, to facilitate processing (filling, pumping, ...) but once the product is reheated before consumption, it has a significantly higher viscosity.

I. Kettlitz does not teach or disclose a UHT-treated product.

Elected claims 1-6, 16 and 21 recite “A UHT-treated product...”, claims 7, 17 and 18 recite “A UHT-treated white sauce...”, claim 22 defines the reheated UHT-treated product in product by process language, claim 23 recites “A UHT-treated food product...”, and claim 24 recites “A reheated

food product... wherein said product has been UHT-treated before reheating to obtain a UHT-heated product...”

The Office Action concedes “Kettlitz et al. do not specifically disclose UHT treatment of food products.” Office Action, page 5.

Nowhere in Daenzer-Alloncle is there stated anything about the viscosity behavior of the cream upon reheating, nor is there indication as to viscosity behavior of specific modified starches upon reheating after UHT-treatment.

So, combining the teachings of Daenzer-Alloncle and Kettlitz does not give a person skilled in the art the incentive to apply UHT with a specific starch --for the sake of argument-- taught by Kettlitz to obtain the surprising effect of a product having a relatively low viscosity after UHT treatment while developing its final viscosity only after reheating.

Therefore: How can and why would a person skilled in the art who wants to solve the technical problem addressed by Applicants combine Daenzer-Alloncle and Kettlitz to come to the solution presented in the present application? How and what in the cited references would have suggested introducing the modified starch as taught by Kettlitz (who does not suggest UHT) in a fluid cream as taught by Daenzer-Alloncle will give him the solution to the problem confronting Applicants? **The answers are not found in the cited art.**

II. The prior art does not teach the viscosities recited in Applicants’ claims.

The cited prior art does not teach: (A) “wherein, after UHT-treatment, said UHT-treated product has a viscosity between 0.10 to 0.50 times the viscosity obtainable after re-heating of said UHT-treated product” as in claim 1; “b) a viscosity after UHT treatment of below 1500 mPa.s, and c) a viscosity after re-heating that increases to above 2000 mPa.s” as in claim 7; “wherein the UHT-treated product has a viscosity that increases upon reheating, and whereby the viscosity is 0.15 to 0.50 times the viscosity obtained after reheating the UHT-treated product in step (f)” as in claim 22; or “said product has been UHT-treated before reheating to obtain a UHT-heated product, and said UHT-heated product

has a viscosity that is below 1500 mPa.s and is 0.15 to 0.50 times the viscosity of said reheated food product, said reheated food product having a viscosity above 2000 mPa.s” as in claim 24.

a. Since “Kettlitz et al do not specifically disclose UHT treatment of the food products,” Office Action, page 5, Kettlitz would not and could not have suggested an increase in viscosity as recited in claims 1, 7, 22 or 24.

Kettlitz discloses stabilized starches that *maintain/retain* their pre-existing viscosity *even after reheating*. Kettlitz states the “high viscosity is also retained after repeated heating and cooling.” Kettlitz at col. 4, lines 30-31. This would not have suggested the viscosity recitations in any of claims 1, 7, 22 or 24, especially not the increase in viscosity upon reheating the UHT-treated product, and certainly not the viscosity recited in the heating, cooling and reheating in claim 22.

Besides, Kettlitz elsewhere refers to “heat-stable high viscosity starches” (Abstract) and at column 4, lines 7-8, and lines 12-16, Kettlitz explains:

The products of the present invention are starches which ... have been modified in such a way that they retain a high viscosity even upon prolonged heating.

* * *

The starches of the present invention show only a slight decrease of viscosity during the measurement with the Brabender viscograph, preferably the drop in viscosity is less than 20%[,] more preferably less than 10%[,] during heating at 95°C.

Moreover, upon perusal, the figures show clearly that Kettlitz has not tested heating at UHT conditions. “[D]uring heating at 95°C” is not UHT.

Applicants have considered the Office Action and its references to specific passages in Kettlitz. The Office Action cites a paragraph mentioning heating (Kettlitz, col. 1, lines 46-50). That paragraph refers to “cooking stable starches” (col. 1, line 46). An antecedent to “cooking stable starches” includes col. 1, lines 35-36 that refer to a heat stage that “guarantees a stable paste viscosity.” Kettlitz’s teaching is a heating (not UHT) that “guarantees a stable paste viscosity.” This ‘guaranteed’ stable paste viscosity is repeated in the subsequent Kettlitz disclosure in col. 4 that the modified starches have a stable

viscosity upon repeated heating and cooling. In short, a “stable paste viscosity” is not the viscosity increase recited in Applicants’ claims 1, 7, 22 or 24, nor is it what is alleged in the Office Action.

In short, Kettlitz provides a modified starch which develops a high viscosity upon heating (similarly to all starches) but when heating goes up to 95°C (which differs from UHT), this starch maintains its high viscosity (purpose of the modification). Also when it is subjected to different heat treatments (col. 4, line 5 to 16), the high viscosity is retained. Nor in the description, nor in the figures there is made any mention about heating above 95°C. So Kettlitz does not know, and is not giving any indication of what, if anything happens after UHT conditions (typically from 120°C to much higher temperatures) have been applied.

As a consequence, Kettlitz would not and could not have suggested the viscosity recitations in any of claim 1, 7, 22 or 24, especially since Kettlitz specifically states that the viscosity is retained/maintained upon repeated reheating and cooling.

b. UHT – not disclosed in Kettlitz

The Office Action acknowledges “Kettlitz et al. do not specifically disclose UHT treatment of the food products.” Office Action, page 5.

The present specification refers to UHT. At page 3, an embodiment with UHT is disclosed as including the steps of “heating the mix by UHT at a temperature higher than 120°C” paragraph [0020]; [0044]; original claim 8 in application as filed; see 138°C - 140°C per paragraph [0055] in the application as filed.

Ultra-high-temperature (UHT) treatment enables sterility to be achieved with minimal change to the product. Specification, page 5, paragraph [0033], as filed.

c. Daenzer-Alloncle does **not suggest (i) increasing the viscosity by heating a UHT-treated product, (ii) what, if any, viscosity behavior to expect upon reheating a UHT-treated food product, or (iii) selecting the modified starch enables a UHT-treated product to have increased viscosity upon reheating.**

Nothing in Daenzer-Alloncle gives the slight indication as to viscosity upon reheating a UHT-treated product that included specific types of modified starches.

In all four of the Daenzer-Alloncle examples it is clear that the use of the viscosity control components (i to iii) is to provide a final viscosity ranging from 250 to 1600mPas, but nothing is mentioned about the viscosity behavior after a reheating step, nor is there indication of any reheating step in those examples.

III. Applicants submit even if, for the sake of argument, Kettlitz were combined with Daenzer-Alloncle, the claims would have been *unobvious*.

Daenzer-Alloncle only mentions that following components are responsible for the control of the viscosity of the liquid cream: (i) modified starch OR (ii) the modified starch and maltodextrin OR (iii) maltodextrin and xanthan gum, meaning that those component are responsible to provide to the cream a viscosity ranging between 250 and 1600mPas.

For instance, the secondary reference would not have suggested “said reheated food product having a viscosity above 200 mPas. ...” as stated in independent claim 24.

If one of ordinary skill in the art were even considering a reheatable UHT-treated product and considering viscosity retention or even increasing viscosity, the secondary reference to Daenzer-Alloncle would not have been among the documents and literature considered. Indeed, the secondary reference seeks to provide a *fluid* lactic cream having good viscosity despite reduced fat content. It is consumed “as is”, cold, without any reheating, nor does it suggest reheating to achieve a thickening effect, since such an effect is not germane to a *fluid* lactic cream.

In other words, Daenzer-Alloncle refers to *fluid* lactic creams, and those who are skilled in the art understand that such fluid lactic creams are typically consumed *cold*. Thus there would have been no reason to reheat a *fluid* lactic cream. There would have been no reason to expect or to consider increased viscosity (thickening effect) after heating the already UHT-treated food product. That is, Daenzer-Alloncle would not have suggested a UHT-treated product that should develop its viscosity when re-heated.

Taking the combined references at face value, even if, *arguendo*, the use of a stabilized, heat-treated starch according to the Kettlitz patent, which is not a UHT-treated product, were considered with the product according to Daenzer-Alloncle, it might have led -- *arguendo* -- to speculation about a product might have a retained/maintained viscosity (see Kettlitz at col. 4, lines 5-16) and perhaps one that might be storage-stable according to Daenzer-Alloncle, but there would have been no expectation of obtaining a reheated UHT-treated product having an increased viscosity.

In short, a person of ordinary skill in the art would have had no incentive or reason to select for UHT-treated products that particular starch of Kettlitz for use in Daenzer-Alloncle, nor selecting it for solving Applicants' problem.

Restated, Applicants confronted a problem needing a solution, namely, the provision of a heat-treated, sterilized product having a relatively low viscosity after a UHT treatment, and displaying an increased viscosity when reheated. Kettlitz does not mention UHT-treatment and, furthermore, teaches products that maintain a stable high viscosity upon reheating or cooling. Kettlitz specifically discloses the "high viscosity is also retained after repeated heating and cooling" (col. 4, lines 30-31), but not the increased viscosity as seen in claims 1, 7, 22 or 24. These gaps in the teachings of the prior art cited against the claims are not overcome by citation to the fluid lactic cream products according to Daenzer-Alloncle.

The Daenzer-Alloncle reference apparently does not suggest the modified starch in Kettlitz, nor the viscosity features recited in the claims.

Therefore, even if Daenzer-Alloncle would have been combined with Kettlitz, the combination would not have suggested the viscosity increase by re-heating the UHT-heated product as stated in claims 1, 7, 22 or 24.

IV. Examiner's Declaration

Applicants respectfully request a declaration from the Examiner setting forth a factual basis for (1) reheating a fluidic lactic cream; (2) why a person of ordinary skill would have considered reheating such a fluidic lactic cream with an expectation that its viscosity would increase as recited in the claims;

and (3) asserting that “viscosity after re-heating, this characteristic would have been expected to be in the claimed range...” in view of Kettlitz at col. 4, lines 5-16.

V. Conclusion

Applicants, therefore, courteously solicit favorable reconsideration and allowance. Upon indication of allowable subject matter, Applicants authorize the Examiner to cancel without prejudice or disclaimer the non-elected claims in order to place the application in condition for allowance.

The Examiner is courteously invited to contact Applicants’ legal representative in an effort to resolve any remaining issues.

VI. Fees

To the extent necessary during prosecution, Applicants hereby request any required extension of time not otherwise requested and hereby authorize the Commissioner to charge any omitted fee required to secure entry of this Amendment, including application processing, extension, and extra claims fees, to Deposit Account No 06-1135 regarding our order number 7393/84061.

Respectfully submitted,

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